

**Flood Control Project Maintenance  
Levee Inspections**

**Fall 2011 Levee Maintenance Deficiency Summary Report**

**Overall LMA & Unit Ratings, including USACE Erosion Survey**

**Sacramento River Basin**

<b>NA0002</b>	Overall LMA Rating	Total LMA Miles				
<b>Brannan Andrus Levee Maintenance District</b>	<b>M</b>	<b>19.32</b>				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	Encroachments	
					PO Miles	CO Miles
<i>Earthen Levee</i>						
Vegetation	0.36	0.01	0.40	2.07%		
Trim / Thin Trees	1.04		1.04	5.38%		
Encroachments	0.04		0.04	0.21%	0.23	0.29
Animal Control	0.01		0.01	0.05%		
<i>Supplemental</i>						
USACE Erosion Survey	1.08	0.25	2.08	10.77%		
<i>LMA Totals:</i>	2.53	0.26	3.57	18.48%	0.23	0.29

<b>Unit No. 01 Georgiana Slough RB</b>	Overall Unit Rating	Total Unit Miles	* Overall Unit Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall Unit Rating is M instead of A.			
NA0002	<b>M *</b>	<b>6.02</b>				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	Encroachments	
					PO Miles	CO Miles
<i>Earthen Levee</i>						
Vegetation	0.30	0.01	0.34	5.65%		
Trim / Thin Trees	0.16		0.16	2.66%		
Encroachments	0.02		0.02	0.33%		0.09
Animal Control	0.01		0.01	0.17%		
<i>Unit Totals:</i>	0.49	0.01	0.53	8.80% *	0.00	0.09

<b>Unit No. 02 Sacramento River LB</b>	Overall Unit Rating	Total Unit Miles				
NA0002	<b>U</b>	<b>13.30</b>				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	Encroachments	
					PO Miles	CO Miles
<i>Earthen Levee</i>						
Vegetation	0.06		0.06	0.45%		
Trim / Thin Trees	0.88		0.88	6.62%		
Encroachments	0.02		0.02	0.15%	0.23	0.20
<i>Supplemental</i>						
USACE Erosion Survey	1.08	0.25	2.08	15.64%		
<i>Unit Totals:</i>	2.04	0.25	3.04	22.86%	0.23	0.20

**Flood Control Project Maintenance  
Levee Inspections**  
**LMA District Cover Sheet**  
**Fall 2011 Levee Inspection Results**

**Brannan Andrus Levee Maintenance District**

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
* Overall LMA Rating (Fall Only)			M	

\*\* Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.

\*  
SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports.

Comments


**Flood Control Project Maintenance  
Levee Inspections**

**Unit Cover Sheet**

**Fall 2011 Levee Inspection Results**

**Brannan Andrus Levee Maintenance District**

Waterway			Bank	Unit Miles
Unit No. 01 Georgiana Slough			Right	6.02
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			M	
Date of Inspection	4/20/2011 - 4/20/2011		10/19/2011 - 10/19/2011	
DWR Inspector	Richard Willoughby		Richard Willoughby	
Accompanied By	Gil Labrie DCC Engineering		Gil Labrie DCC Engineering	

Check one:

- ☐ During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. We have found no changes in flood project conditions other than the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the enclosed report.
- ☐ During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. In addition to the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the report, we have found the following changes in flood project conditions.

(In the comment section below or on additional sheet(s), identify change of condition by: Start to End Levee Mile or GPS coordinates, location (Land Side, Water Side, or Crown), Item identification, and description of the current condition).

**Comments**

One of the boxes above is to be checked by the Local Maintaining Agency (LMA). If the second box is checked, additional information must also be submitted. This Unit Cover Sheet should be signed and dated by the LMA Representative and returned to DWR with any additional sheets by September 30 (Summer Inspection) or March 31 (Winter Inspection). Please retain a copy for your records. Please mail all of this information to :

DWR Summer/Winter Inspection Reports  
3310 El Camino Avenue, Suite 200  
Sacramento, CA 95821-9000

**X**

Signature of LMA Representative

Date

**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Georgiana Slough	Right	6.02	10/19/2011 10/19/2011	Richard Willoughby

LMR No.	Levee Mile		Category	Item	* Location	** Rating	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
1	0.50	0.75	Earthen Levee	Vegetation	LS	M	Remove the wild growth other than native grasses from the levee slopes. Inspector Comments: Wild roses or berryvines at landside toe.	38.182702 ° -121.570497 °	38.182198 ° -121.574877 °	1 Y
2	2.25	2.25	Earthen Levee	Trim / Thin Trees	LS	W	Trim trees to at least five feet above ground level.	38.163460 ° -121.584406 °	38.163460 ° -121.584406 °	6
3	2.29	2.34	Earthen Levee	Encroachments	LS	CO	Landscaping	38.162918 ° -121.584721 °	38.162322 ° -121.585081 °	36 Y
4	2.30	2.30	Earthen Levee	Encroachments	WS	M	Firewood	38.162773 ° -121.584767 °	38.162773 ° -121.584767 °	3 Y
5	2.36	2.36	Earthen Levee	Animal Control	LS	M	No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.	38.162004 ° -121.585229 °	38.162004 ° -121.585229 °	7
6	2.38	2.46	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	38.161731 ° -121.585352 °	38.160638 ° -121.585845 °	8
7	3.62	3.62	Earthen Levee	Trim / Thin Trees	LS	W	Trim trees to at least five feet above ground level.	38.151744 ° -121.596425 °	38.151744 ° -121.596425 °	9
8	3.75	3.75	Earthen Levee	Encroachments	WS	W	Tree or limb Inspector Comments: Downed tree on waterside slope.	38.150573 ° -121.598352 °	38.150573 ° -121.598352 °	22
9	3.93	3.93	Earthen Levee	Vegetation	WS	U	Remove the wild growth other than native grasses from the levee slopes.	38.148379 ° -121.599970 °	38.148379 ° -121.599970 °	10 Y
10	3.93	3.97	Earthen Levee	Encroachments	LS	CO	Landscaping	38.148318 ° -121.599947 °	38.147898 ° -121.600347 °	11 Y
11	4.18	4.20	Earthen Levee	Trim / Thin Trees	LS	W	Trim trees to at least five feet above ground level.	38.145094 ° -121.601585 °	38.144817 ° -121.601477 °	12
12	4.25	4.28	Earthen Levee	Trim / Thin Trees	WS	M	Trim trees to at least five feet above ground level.	38.144134 ° -121.601177 °	38.143747 ° -121.600924 °	13
13	4.36	4.36	Earthen Levee	Trim / Thin Trees	WS	M	Trim trees to at least five feet above ground level.	38.142838 ° -121.600163 °	38.142838 ° -121.600163 °	21
14	4.79	4.94	Earthen Levee	Seepage / Sandboils	LS	C	Inspector Comments: Seepage was discovered by the district and repaired by the district. District installed French drains to handle seepage.	38.137350 ° -121.596413 °	38.135542 ° -121.594643 °	5
15	4.98	4.98	Earthen Levee	Trim / Thin Trees	WS	W	Trim trees over roadway to at least 12 feet above ground level.	38.135158 ° -121.594198 °	38.135158 ° -121.594198 °	14
16	5.11	5.11	Earthen Levee	Trim / Thin Trees	WS	W	Trim trees over roadway to at least 12 feet above ground level.	38.133759 ° -121.592598 °	38.133759 ° -121.592598 °	15
17	5.25	5.25	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	38.132238 ° -121.590897 °	38.132238 ° -121.590897 °	16

<b>* Location</b> LS : Land Side WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	PO : Partially Obstructing CO : Completely Obstructing W : Watch/Monitor	N : Not Inspected, see Inspector Comment C : Corrected
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway					Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Georgiana Slough					Right	6.02	10/19/2011 10/19/2011	Richard Willoughby

LMR No.	Levee Mile		Category	Item	Location *	Rating **	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
18	5.33	5.33	Earthen Levee	Trim / Thin Trees	WS	M	Trim trees to at least five feet above ground level.	38.131327 ° -121.589980 °	38.131327 ° -121.589980 °	2
19	5.42	5.42	Earthen Levee	Encroachments	LS	M	Tree or limb Inspector Comments: Downed tree limb on landside slope.	38.130355 ° -121.588942 °	38.130355 ° -121.588942 °	4 Y
20	5.63	5.67	Earthen Levee	Vegetation	WS	M	Remove the wild growth other than native grasses from the levee slopes. Inspector Comments: Wild roses or berryvines on waterside slope.	38.129240 ° -121.585328 °	38.129252 ° -121.584723 °	18 Y
21	5.69	5.69	Earthen Levee	Vegetation	WS	M	Remove the wild growth other than native grasses from the levee slopes. Inspector Comments: Willows on waterside slope	38.129307 ° -121.584253 °	38.129307 ° -121.584253 °	19
22	5.79	5.81	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	38.129537 ° -121.582760 °	38.129599 ° -121.582155 °	17

**\* Location**

LS : Land Side  
WS : Water Side  
CR : Crown

**\*\* Rating**

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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Georgiana Slough	Right	6.02	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	1
Start Levee Mile	0.50
End Levee Mile	0.75
Location	Land Side
Category	Earthen Levee
Item	Vegetation
Looking southwest at wild roses or berryvines on landside toe.	
richard_f_20111020_317.jpg	



Levee Mile Report Line	3
Start Levee Mile	2.29
End Levee Mile	2.34
Location	Land Side
Category	Earthen Levee
Item	Encroachments
Looking south at dense landscape on waterside and landside of levee.	
richard_f_20111020_318.jpg	



Levee Mile Report Line	3
Start Levee Mile	2.29
End Levee Mile	2.34
Location	Land Side
Category	Earthen Levee
Item	Encroachments
Looking west at ground cover on landside slope.	
richard_f_20111020_319.jpg	

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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Georgiana Slough	Right	6.02	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	3
Start Levee Mile	2.29
End Levee Mile	2.34
Location	Land Side
Category	Earthen Levee
Item	Encroachments
Looking north at dense vegetation on waterside slope.	
richard_f_20111020_320.jpg	



Levee Mile Report Line	4
Start Levee Mile	2.30
End Levee Mile	2.30
Location	Water Side
Category	Earthen Levee
Item	Encroachments
Looking east at firewood on waterside shoulder.	
richard_f_20111020_321.jpg	



Levee Mile Report Line	4
Start Levee Mile	2.30
End Levee Mile	2.30
Location	Water Side
Category	Earthen Levee
Item	Encroachments
Looking south at firewood on waterside shoulder.	
richard_f_20111020_322.jpg	

**\* Location**

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**Flood Control Project Maintenance  
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**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Georgiana Slough	Right	6.02	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	9
Start Levee Mile	3.93
End Levee Mile	3.93
Location	Water Side
Category	Earthen Levee
Item	Vegetation

Looking west at dense vegetation on waterside slope.

richard\_f\_20111014\_301.jpg



Levee Mile Report Line	10
Start Levee Mile	3.93
End Levee Mile	3.97
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Looking northeast at landscape on landside slope.

richard\_f\_20111020\_323.jpg



Levee Mile Report Line	10
Start Levee Mile	3.93
End Levee Mile	3.97
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Looking west at dense landscape on landside slope.

richard\_f\_20111020\_324.jpg



**\* Location**

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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Georgiana Slough	Right	6.02	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	19
Start Levee Mile	5.42
End Levee Mile	5.42
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Looking southwest downed tree limb on landside slope.

richard\_f\_20111020\_329.jpg



Levee Mile Report Line	20
Start Levee Mile	5.63
End Levee Mile	5.67
Location	Water Side
Category	Earthen Levee
Item	Vegetation

Looking south at dense vegetation on waterside slope.

richard\_f\_20111020\_330.jpg



**\* Location**

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**Flood Control Project Maintenance  
Levee Inspections**

**Unit Cover Sheet**

**Fall 2011 Levee Inspection Results**

**Brannan Andrus Levee Maintenance District**

Waterway			Bank	Unit Miles
Unit No. 02 Sacramento River			Left	13.30
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			U	
Date of Inspection	3/29/2011 - 3/29/2011		10/19/2011 - 10/19/2011	
DWR Inspector	Richard Willoughby		Richard Willoughby	
Accompanied By	Andy Ginnianni BALMD		Andy Ginnianni BALMD	
	Gil Labrie DCC Engineering		Gil Labrie DCC Engineering	

Check one:

- ☐ During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. We have found no changes in flood project conditions other than the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the enclosed report.
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(In the comment section below or on additional sheet(s), identify change of condition by: Start to End Levee Mile or GPS coordinates, location (Land Side, Water Side, or Crown), Item identification, and description of the current condition).

Comments

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3310 El Camino Avenue, Suite 200  
Sacramento, CA 95821-9000

X

Signature of LMA Representative

Date

**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway						Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sacramento River						Left	13.30	10/19/2011 10/19/2011	Richard Willoughby

LMR No.	Levee Mile		Category	Item	Location *	Rating **	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
1	0.42	0.42	Earthen Levee	Encroachments	LS	PO	Fences	38.189212 ° -121.574757 °	38.189212 ° -121.574757 °	26
2	0.67	0.67	Earthen Levee	Trim / Thin Trees	LS	W	Trim trees to at least five feet above ground level.	38.187486 ° -121.578783 °	38.187486 ° -121.578783 °	1
3	0.78	0.83	Earthen Levee	Trim / Thin Trees	WS	M	Trim trees to at least five feet above ground level.	38.186535 ° -121.580395 °	38.186103 ° -121.581127 °	2
4	0.81	0.83	Earthen Levee	Encroachments	LS	PO	Landscaping	38.186455 ° -121.580712 °	38.186215 ° -121.581060 °	8 Y
5	1.44	1.44	Earthen Levee	Trim / Thin Trees	LS	W	Trim trees to at least five feet above ground level.	38.178950 ° -121.587717 °	38.178950 ° -121.587717 °	27
6	1.59	1.61	Earthen Levee	Encroachments	LS	CO	Landscaping	38.177105 ° -121.589058 °	38.176837 ° -121.589225 °	35
7	1.64	1.64	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	38.176486 ° -121.589445 °	38.176486 ° -121.589445 °	3
8	1.81	1.81	Earthen Levee	Encroachments	LS	CO	Landscaping	38.174302 ° -121.590863 °	38.174302 ° -121.590863 °	28
9	1.83	1.83	Earthen Levee	Encroachments	LS	CO	Buildings	38.174030 ° -121.590963 °	38.174030 ° -121.590963 °	34 Y
10	1.84	1.84	Earthen Levee	Trim / Thin Trees	LS	W	Trim trees to at least five feet above ground level.	38.173905 ° -121.591082 °	38.173905 ° -121.591082 °	4
11	1.91	1.95	Earthen Levee	Encroachments	LS	CO	Landscaping	38.173120 ° -121.591505 °	38.172598 ° -121.591853 °	12 Y
12	2.34	2.38	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	38.167627 ° -121.595538 °	38.167152 ° -121.595997 °	25
13	2.48	2.48	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	38.166378 ° -121.597570 °	38.166378 ° -121.597570 °	29
14	2.53	2.63	Supplemental	USACE Erosion Survey	WS	M	Inspector Comments: 2009 - Short reach of vertical bank at the toe. 2010 - Large tree is getting ready to fall in. 2011: No observed change. [2011 Site ID: SAC_18-1_L]	38.165945 ° -121.599345 °	38.165498 ° -121.600080 °	17 Y
15	2.66	2.74	Supplemental	USACE Erosion Survey	WS	M	Inspector Comments: 2009 - Large scallop from rotational failure. One fallen tree and one large tree with half of its root structure exposed. 2011: No observed change. [2011 Site ID: SAC_18-0_L]	38.165303 ° -121.600477 °	38.164682 ° -121.601804 °	18 Y
16	2.93	3.13	Earthen Levee	Encroachments	LS	PO	Urban	38.163317 ° -121.604813 °	38.162707 ° -121.608262 °	30

**\* Location**

LS : Land Side  
WS : Water Side  
CR : Crown

**\*\* Rating**

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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway						Bank	Unit Miles	Inspection Start/End	Inspector	
Unit No. 02 Sacramento River						Left	13.30	10/19/2011 10/19/2011	Richard Willoughby	
LMR No.	Levee Mile		Category	Item	Location *	Rating **	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
17	3.17	3.17	Earthen Levee	Trim / Thin Trees	WS	M	Trim trees over roadway to at least 12 feet above ground level.	38.162638 ° -121.609068 °	38.162638 ° -121.609068 °	5 Y
18	3.20	3.20	Earthen Levee	Trim / Thin Trees	WS	W	Trim trees over roadway to at least 12 feet above ground level.	38.162643 ° -121.609616 °	38.162643 ° -121.609616 °	6
19	3.22	3.22	Earthen Levee	Trim / Thin Trees	LS	M	Thin trees to allow visibility of the ground and room to flood fight.	38.162609 ° -121.609979 °	38.162609 ° -121.609979 °	7
20	3.32	3.49	Supplemental	USACE Erosion Survey	WS	U	Inspector Comments: 2009 - Fluvial erosion, into the levee slope, close to vertical bank with roadway on top. Pilings that were once at the bankline are now 30 ft out. 2010 - Very steep slope with slumps and overturned trees. 2011: Upgraded to CRITICAL. Sections of vertical slope with highway on top. Heavy vegetation in front of most of the erosion pockets. Structures built into the levee on the upstream end. [2011 Site ID: SAC_17-2_L]	38.162641 ° -121.612800 °	38.162828 ° -121.616263 °	19 Y
21	3.53	3.60	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	38.162590 ° -121.615345 °	38.162728 ° -121.616622 °	22
22	3.62	3.70	Supplemental	USACE Erosion Survey	WS	U	Inspector Comments: 2008 - Overstepped levee section with pocket erosion. Plans for repair currently in the design phase. 2010 - Very steep slope with slumps, longitudinal cracking, and overturned trees. 2011: Upgraded to CRITICAL. Sections of vertical slope with highway on top. Heavy vegetation in front of most of the erosion pockets. [2011 Site ID: SAC_16-8_L]	38.162959 ° -121.617323 °	38.163334 ° -121.619312 °	20 Y
23	4.01	4.01	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	38.164470 ° -121.624012 °	38.164470 ° -121.624012 °	31
24	4.04	4.15	Earthen Levee	Encroachments	LS	CO	Landscaping	38.164498 ° -121.624343 °	38.165167 ° -121.626273 °	59
25	4.47	4.47	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	38.167135 ° -121.631662 °	38.167135 ° -121.631662 °	32
26	5.19	5.43	Earthen Levee	Trim / Thin Trees	WS	M	Trim trees to at least five feet above ground level.	38.171455 ° -121.643229 °	38.171800 ° -121.647447 °	9
27	5.59	5.59	Earthen Levee	Trim / Thin Trees	WS	W	Trim trees to at least five feet above ground level.	38.172019 ° -121.650327 °	38.172019 ° -121.650327 °	10
28	5.66	5.70	Earthen Levee	Vegetation	WS	W	Remove the wild growth other than native grasses from the levee slopes.	38.172308 ° -121.651552 °	38.172497 ° -121.652243 °	11

**\* Location**

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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway				Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sacramento River				Left	13.30	10/19/2011 10/19/2011	Richard Willoughby

LMR No.	Levee Mile		Category	Item	Location *	Rating **	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
29	5.68	5.71	Supplemental	USACE Erosion Survey	WS	M	Inspector Comments: 2009 - Tension cracks on road on top of levee. Erosion into the levee slope with large mass failure scallop. 2010 - Site extended further upstream to account for additional erosion. Very steep slope with slumping. 2011: No observed change. [2011 Site ID: SAC_15-0_L]	38.172580 ° -121.651821 °	38.172733 ° -121.652499 °	21 Y
30	5.68	5.71	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	38.172388 ° -121.651892 °	38.172512 ° -121.652322 °	36
31	5.82	6.15	Earthen Levee	Vegetation	LS	W	Remove the wild growth other than native grasses from the levee slopes.	38.173130 ° -121.654285 °	38.174559 ° -121.659867 °	13
32	6.35	6.38	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	38.173586 ° -121.663297 °	38.173391 ° -121.663786 °	14
33	6.82	6.82	Earthen Levee	Encroachments	LS	CO	Fences	38.169008 ° -121.669420 °	38.169008 ° -121.669420 °	42 Y
34	7.00	7.05	Supplemental	USACE Erosion Survey	WS	M	Inspector Comments: 2011: Large section of bank slumped off. [2011 Site ID: SAC_13-6_L]	38.166583 ° -121.670684 °	38.165794 ° -121.671014 °	23 Y
35	7.66	7.66	Earthen Levee	Encroachments	LS	M	Prunings	38.157055 ° -121.675445 °	38.157055 ° -121.675445 °	24 Y
36	8.07	8.44	Supplemental	USACE Erosion Survey	WS	M	Inspector Comments: 2010 - Small inlet area behind a man-built spit. Bank is slumping and could possibly be fixed with maintenance. 2011: Site continues to worsen. [2011 Site ID: SAC_12-1_L]	38.151867 ° -121.682201 °	38.148711 ° -121.682790 °	37 Y
37	8.35	8.71	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	38.150112 ° -121.682305 °	38.144977 ° -121.683345 °	44 Y
38	8.46	8.46	Earthen Levee	Encroachments	WS	M	Tree or limb	38.148323 ° -121.682548 °	38.148323 ° -121.682548 °	33
39	8.94	9.17	Supplemental	USACE Erosion Survey	WS	M	Inspector Comments: 2008 - Erosion causing vertical bank at the highway on top of levee. The whole bank along the highway should be repaired. 2009 - Minimal new erosion. 2011: Bank continues to slowly erode. [2011 Site ID: SAC_11-2_L]	38.141399 ° -121.685346 °	38.138158 ° -121.686531 °	38 Y
40	9.42	9.42	Earthen Levee	Trim / Thin Trees	WS	W	Trim trees to at least five feet above ground level.	38.135106 ° -121.686065 °	38.135106 ° -121.686065 °	15
41	9.68	9.74	Earthen Levee	Vegetation	WS	M	Remove the wild growth other than native grasses from the levee slopes.	38.131448 ° -121.686432 °	38.130537 ° -121.686737 °	16

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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sacramento River	Left	13.30	10/19/2011 10/19/2011	Richard Willoughby

LMR No.	Levee Mile		Category	Item	Location *	Rating **	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	

42	9.72	9.94	Supplemental	USACE Erosion Survey	WS	M	Inspector Comments: 2004 - Wave wash pockets approximately 100 ft long with new full bank rock between the pockets. 2005 - Spot repairs, but toe is still eroding in several places. 2006 - Low vertical bank along roadway. 2007 - A PL 84-99 repair was constructed, it cover the majority of the site with the exception of the upstream 150 to 200 ft and the downstream 250 ft, therefore it is being kept in the inventory. 2009 - Minimal new erosion. 2010 - Outboard berm looks good, but the banks are still very steep. 2011: While the outboard berm is protecting against wavewash, bank still has slumping issues. [2011 Site ID: SAC_10-8_L]	38.129722 ° -121.687468 °	38.127672 ° -121.688646 °	39 Y
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**\* Location**

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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sacramento River	Left	13.30	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	4
Start Levee Mile	0.81
End Levee Mile	0.83
Location	Land Side
Category	Earthen Levee
Item	Encroachments
Landscaping on landside slope blocking view of slope from LM .81 to 0.83	
richard_f_20111014_304.jpg	



Levee Mile Report Line	9
Start Levee Mile	1.83
End Levee Mile	1.83
Location	Land Side
Category	Earthen Levee
Item	Encroachments
Looking northeast tool shed on landside toe.	
richard_f_20111020_316.jpg	



Levee Mile Report Line	11
Start Levee Mile	1.91
End Levee Mile	1.95
Location	Land Side
Category	Earthen Levee
Item	Encroachments
Landscaping on landside slope blocking view of slope from LM 1.91 to 1.95	
richard_f_20111014_305.jpg	



<b>* Location</b> LS : Land Side WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	PO : Partially Obstructing CO : Completely Obstructing W : Watch/Monitor	N : Not Inspected, see Inspector Comment C : Corrected
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sacramento River	Left	13.30	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	14
Start Levee Mile	2.53
End Levee Mile	2.63
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #1

USACE2011\_SAC\_18-1\_L\_1.jpg



Levee Mile Report Line	14
Start Levee Mile	2.53
End Levee Mile	2.63
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #2

USACE2011\_SAC\_18-1\_L\_2.jpg



Levee Mile Report Line	15
Start Levee Mile	2.66
End Levee Mile	2.74
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #1

USACE2011\_SAC\_18-0\_L\_1.jpg

**\* Location**

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CR : Crown

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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sacramento River	Left	13.30	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	15
Start Levee Mile	2.66
End Levee Mile	2.74
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #2

USACE2011\_SAC\_18-0\_L\_2.jpg



Levee Mile Report Line	17
Start Levee Mile	3.17
End Levee Mile	3.17
Location	Water Side
Category	Earthen Levee
Item	Trim / Thin Trees

Looking south at overhanging tree on waterside shoulder.

richard\_f\_20111014\_303.jpg



Levee Mile Report Line	20
Start Levee Mile	3.32
End Levee Mile	3.49
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #1

USACE2011\_SAC\_17-2\_L\_1.jpg

**\* Location**

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CR : Crown

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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sacramento River	Left	13.30	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	20
Start Levee Mile	3.32
End Levee Mile	3.49
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #2

USACE2011\_SAC\_17-2\_L\_2.jpg



Levee Mile Report Line	20
Start Levee Mile	3.32
End Levee Mile	3.49
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #3

USACE2011\_SAC\_17-2\_L\_3.jpg



Levee Mile Report Line	22
Start Levee Mile	3.62
End Levee Mile	3.70
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #1

USACE2011\_SAC\_16-8\_L\_1.jpg

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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sacramento River	Left	13.30	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	22
Start Levee Mile	3.62
End Levee Mile	3.70
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #2

USACE2011\_SAC\_16-8\_L\_2.jpg



Levee Mile Report Line	29
Start Levee Mile	5.68
End Levee Mile	5.71
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #1

USACE2011\_SAC\_15-0\_L\_1.jpg



Levee Mile Report Line	33
Start Levee Mile	6.82
End Levee Mile	6.82
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Brick wall on landside shoulder at LM 6.82

richard\_f\_20111014\_312.jpg



<b>* Location</b> LS : Land Side WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	PO : Partially Obstructing CO : Completely Obstructing W : Watch/Monitor	N : Not Inspected, see Inspector Comment C : Corrected
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sacramento River	Left	13.30	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	34
Start Levee Mile	7.00
End Levee Mile	7.05
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #1

USACE2011\_SAC\_13-6\_L\_1.jpg



Levee Mile Report Line	34
Start Levee Mile	7.00
End Levee Mile	7.05
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #2

USACE2011\_SAC\_13-6\_L\_2.jpg



Levee Mile Report Line	34
Start Levee Mile	7.00
End Levee Mile	7.05
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #3

USACE2011\_SAC\_13-6\_L\_3.jpg

**\* Location**

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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sacramento River	Left	13.30	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	35
Start Levee Mile	7.66
End Levee Mile	7.66
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Looking west at prunings on landside toe.

richard\_f\_20111020\_314.jpg



Levee Mile Report Line	35
Start Levee Mile	7.66
End Levee Mile	7.66
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Looking south at prunings on landside toe.

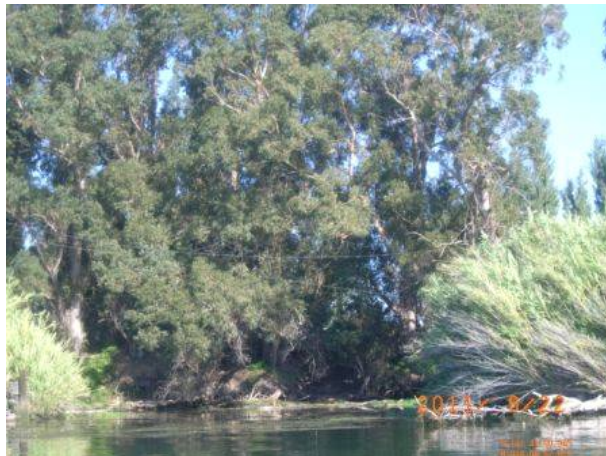
richard\_f\_20111020\_315.jpg



Levee Mile Report Line	36
Start Levee Mile	8.07
End Levee Mile	8.44
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #1

USACE2011\_SAC\_12-1\_L\_1.jpg



<b>* Location</b> LS : Land Side WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	PO : Partially Obstructing CO : Completely Obstructing W : Watch/Monitor	N : Not Inspected, see Inspector Comment C : Corrected
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sacramento River	Left	13.30	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	36
Start Levee Mile	8.07
End Levee Mile	8.44
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #2

USACE2011\_SAC\_12-1\_L\_2.jpg



Levee Mile Report Line	37
Start Levee Mile	8.35
End Levee Mile	8.71
Location	Land Side
Category	Earthen Levee
Item	Trim / Thin Trees

Looking southeast at trees on landside shoulder and slope.

richard\_f\_20111014\_313.jpg



Levee Mile Report Line	39
Start Levee Mile	8.94
End Levee Mile	9.17
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #1

USACE2011\_SAC\_11-2\_L\_1.jpg



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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sacramento River	Left	13.30	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	39
Start Levee Mile	8.94
End Levee Mile	9.17
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #2

USACE2011\_SAC\_11-2\_L\_2.jpg



Levee Mile Report Line	39
Start Levee Mile	8.94
End Levee Mile	9.17
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #3

USACE2011\_SAC\_11-2\_L\_3.jpg



Levee Mile Report Line	42
Start Levee Mile	9.72
End Levee Mile	9.94
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #1

USACE2011\_SAC\_10-8\_L\_1.jpg

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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2011**

**Brannan Andrus Levee Maintenance District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sacramento River	Left	13.30	10/19/2011 10/19/2011	Richard Willoughby

Levee Mile Report Line	42
Start Levee Mile	9.72
End Levee Mile	9.94
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #2

USACE2011\_SAC\_10-8\_L\_2.jpg



Levee Mile Report Line	42
Start Levee Mile	9.72
End Levee Mile	9.94
Location	Water Side
Category	Supplemental
Item	USACE Erosion Survey

USACE 2011 Photo #3

USACE2011\_SAC\_10-8\_L\_3.jpg



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